IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Karl J. Wood et al.
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APPEAL BRIEF
On Appeal from Group Art Unit 2621

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I. REAL PARTY IN INTEREST

The real party in interest is Koninklijke Philips Electronics N.V., the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any pending appeals, judicial proceedings, or interferences which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

a) Claims 1-3, 5-7, 9-14, 16-18, 20 and 22 are pending.

b) Claims 1-3, 5-7, 9-14, 16-18, 20 and 22 stand rejected and are the subject of this appeal.

c) Claims 1, 13 and 22 are independent.

IV. STATUS OF AMENDMENTS

The claims listed in section "VIII. Claims Appendix" of this Appeal Brief correspond to the claims as amended and submitted in Appellant's response of December 29, 2006. These amendments were entered by the Examiner. No claim amendments have been submitted following the response of December 29, 2006. Nor are any claim amendments pending.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention, as recited in claim 1, is directed to an apparatus for producing a stereoscopic image. The apparatus comprising display means (figs. 1, 100; figs 3-4; page 3, lines

8-21) for displaying two sub-images spaced from one another at a first distance along an X-axis and a second distance along a Z-axis so as to render the stereoscopic image (fig. 2, 120, 122; page 3, line 22 to page 4, line 16); and a single user control for adjusting the first and second distances of the stereoscopic image displayed by the display means (fig. 1, 108; page 4, lines 17-28), wherein at least the first distance of the stereoscopic image displayed on the display means is adjusted to correspond to a distance between eyes of a user (page 2, lines 7-14 & lines 26-28; page 3, lines 14-17).

The claimed invention, as recited in claim 13, is directed to a method for producing a stereoscopic image. The method comprising displaying a first and second sub-image (page 3, lines 22-31) on a display (figs. 1, 100; figs 3-4) so that the sub-images are spaced at a first distance along an X-axis and a second distance along a Z-axis to render the stereoscopic image (fig. 2, 120, 122; page 3, line 22 to page 4, line 16); and controlling the first and second distances of the stereoscopic image in response to a user input via a single control (fig. 1, 108; page 4, lines 17-28) so that the first distance of the stereoscopic image is adjusted to correspond to a distance between eyes of a user (page 2, lines 7-14 & lines 26-28, page 3, lines 14-17).

The claimed invention, as recited in claim 22, is directed to an apparatus for producing a stereoscopic image (figs. 1, 100; figs 3-4). The apparatus comprising a plurality of columns and rows of display elements configured to display a stereoscopic image (figs 3-4; page 5, lines 1-27); a plurality of lenticules configured to deflect the stereoscopic image and overlaying the display elements (page 5, line 28 to page 6, line 14), the plurality of lenticules having respective parallel axes extending transversely to the plurality of columns and rows of the display elements (page 6, line 15 to page 8, line 13); and a user controller for adjusting two stereoscopic parameters of the stereoscopic image displayed by the display elements (page 8, lines 14-21).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-3, 9, 10, 12-14, 16, 17, 20 and 22 are properly rejected under 35 USC 102(b) as being anticipated by US Patent 5,777,720 to Shapiro et al. (hereinafter Shapiro).

Whether claim 18 is properly rejected under 35 USC 103(a) as being unpatentable over Shapiro.

Whether claims 5, 7, and 11 are properly rejected under 35 USC 103(a) as being unpatentable over Shapiro in view of US Patent 6,816,158 to Lemelson et al. (hereinafter Lemelson).

Whether claim 6 is properly rejected under 35 USC 103(a) as being unpatentable over Shapiro and Lemelson as applied to claim 1 above, and further in view of US Patent 6,760,020 to Uchiyama.

VII. ARGUMENT

Appellant respectfully traverses the rejections in accordance with the detailed arguments set forth below.

A. Claims 1-3, 9, 10, 12-14, 16, 17, 20 and 22 are not properly rejected under 35 USC 102(b) as being anticipated by Shapiro.

1. Claim 1

Appellant's independent claim 1 recites: "a single user control for adjusting the first and second distances of the stereoscopic image displayed by the display means."

Appellant's features provide the advantage of a user control for adjusting the image to the user preference. Thus, a user may adjust the image to the user's preference. Shapiro fails to teach or even suggest such a feature.

In the Response to Arguments section of the final Office Action, the examiner equates appellant's user control to the data processor of Shapiro. However, the processor in Shapiro, as discussed below, automatically adjusts the images based on optimum viewing zones.

As described in col. 9, lines 16-28 of Shapiro: "The camera 37 monitors the state of illumination of the sheet 35 and the image analyzer 38 analyses the image. The controller 16 steers the programmable illuminator 1, which is shown as being capable of movement in mutually orthogonal x, y and z directions..... The image analyzer 38 controls the effective position of the illuminator via the controller 16 until the viewing zones produced by the display are optimally placed on the sheet 35."

Thus, in Shapiro a processor is automatically adjusting the positions according to placement of viewing zones of programmed distances.

Having the processor automatically adjust the viewing parameters is not a single user control to adjust the first and second distances of the stereoscopic image displayed by the display means. For example, the processor can only adjust according to a pre-programmed set of criteria based on the positioning of the sheet 35. This does not allow the user to make any adjustment whatsoever. If the pre-programmed positioning made by the processor does not satisfy the user, the user has no possible way "for adjusting the first and second distances of the stereoscopic image displayed by the display means." In other words, Shapiro does not teach or suggest "a single user control for adjusting the first and second distances of the stereoscopic image displayed by the display means."

In Shapiro, if the user moves the sheet 35 to different positions, it is the processor adjusting the x, y and z directions for "optimizing" the viewing zone. If a user is not satisfied with the processor's adjustment, the user has no way to make an adjustment to the x, y and z

positions chosen by the processor for this viewing zone. The user can make no change or adjustment for that viewing position. Shapiro's user does not have the advantage of appellant's system, that is, a user control for adjusting as claimed, because the Shapiro's user must accept the processor's positioning in the x, y and z directions.

The final Office Action, page 4, points to Shapiro's tracking system, Figs. 7 & 9, as showing appellant's features of claim 1. As pointed out above, Shapiro fails to teach a user can control the first and second distances as claimed. In Shapiro, the user simply cannot make any changes to the x, y, or z positions chosen by the processor.

Additionally, the Office Action, page 4, points to col. 5, lines 30-38 for teaching calibrating for interpupillary distances and viewing distances. However, clearly col. 5, lines 30-38 teaches automatically compensating for viewers who differ from norms or averages. As recited: "such display adapt automatically to different interocular distances." Thus, Shapiro again describes an automatic adjustment, without any teaching of a user control for adjusting. In Shapiro, the user must accept whatever adjustment the system makes.

Shapiro teaches in col. 11 that for interocular distances mirrors must be adjusted by processor control. Shapiro does not describe the distance between the two sub-images is adjusted by a user control.

For example, col. 11, lines 41-61 of Shapiro describes the mirror 3 is mounted on a tilting mechanism 51 which is controlled by the data processor 50 so as to vary the orientation of the mirror about vertical and horizontal axes. The data processor analyses the images from the camera 37 and, when vertical staggering of the viewing zones of the type shown in FIG. 11d is detected, causes the mechanism 51 to vary the tilt of the mirror about the horizontal axis so as to ensure that the viewing zones become vertically aligned. FIG. 12a illustrates an adult observer

having an interocular distance a. FIG. 12b illustrates the effect of correction for a child observer whose interocular distance b is less than a. The data processor detects the different interocular distance or the misalignment of the viewing zones laterally with respect to the actual observer eyes and moves the mirror about the vertical axis.

In contrast appellant is claiming a single user control for adjusting the first and second distances as particularly recited in claim 1.

Accordingly, Shapiro fails to teach each and every feature recited in appellant's claims and for at least the foregoing reasons it is respectfully requested this rejection be reversed.

2. Claim 13

Appellant's independent claim 13 recites a method for producing a stereoscopic image. The method includes: "controlling the first and second distances of the stereoscopic image in response to a user input via a single control so that the first distance of the stereoscopic image is adjusted to correspond to a distance between eyes of a user" (emphasis added).

The Examiner rejects claim 13 using the same argument as in claim 1 (see final Office Action, page 4). Appellant essentially repeats the above arguments from claim 1 pointing out why independent claim 13 is not anticipated by Shapiro.

Thus, for at least the foregoing reasons, appellant respectfully submits that claim 13 is not anticipated by Shapiro and the rejection should be reversed.

3. Claim 22

Claim 22 recites: "a user controller for adjusting two stereoscopic parameters of the stereoscopic image displayed by the display elements." The Examiner provides no additional information with regard to rejecting this feature as recited in claim 22. It is argued on page 5 of the final Office Action that Shapiro teaches that it is important to adjust the two variables.

However, the Examiner fails to indicate where Shapiro teaches "a user controller for adjusting" as claimed in claim 22. As pointed out above in the discussion of claim 1, Shapiro fails to teach or suggest this feature.

Claim 22 further recites: "the plurality of lenticules having respective parallel axes extending transversely to the plurality of columns and rows of the display elements." (emphasis added).

On page 4 of the final Office Action, the Examiner states: "One such display is an LCD with a lenticular screen (Col 13 Lines 30-38, Fig. 20)."

However, col. 13, lines 30-38 and the entire reference fails to teach having respective parallel axes extending transversely to the plurality of columns and rows of the display elements. Shapiro only describes that each lenticule of the screen 62 is aligned with a pair of strips. Shapiro fails to teach appellant's claimed feature.

Thus, for at least the foregoing reasons, appellant respectfully submits that claim 22 is not anticipated by Shapiro and the rejection should be reversed.

4. Dependent claims 2, 14

Appellant's dependent claim 2 recites: "plurality of image-deflecting lenticules overlying said display means, the display means being configured with an array of display elements arranged in a plurality of columns and rows so that the axes of the lenticules extend transversely to the columns and rows of the display elements." (emphasis added). Dependent claim 14 recites a similar feature.

The Examiner rejects claims 2 and 14 using the same argument as in claim 22 (see final Office Action, page 4). Appellant essentially repeats the above arguments from claim 22 pointing out why dependent claims 2 and 14 are not anticipated by Shapiro. In addition claim 2

depends from claim 1 and claim 14 from claim 13. Appellant further essentially repeats the above arguments from claims 1 and 13 pointing out why these claims are not anticipated.

For at least the foregoing reasons, appellant respectfully submits that claims 2 and 14 are not anticipated by Shapiro and the rejection should be reversed.

5. Dependent Claims 3, 9, 10, 12, 16, 17, 20

These dependent claims depend on one of claims 1 and 13 and, therefore, appellant essentially repeats the above arguments from claims 1 and 13 pointing out why these claims are not anticipated. Consequently, reversal of the 35 U.S.C. §102(b) rejection of these claims is respectfully requested.

B. Claim 18 is not properly rejected under 35 USC 103(a) as being obvious over Shapiro.

Appellant's claim 18 includes the feature of: "A computer program product for causing a computer to execute the method of claim 13." The Examiner simply recites that the features would be obvious by Official Notice.

Appellant respectfully disagrees because Shapiro fails to teach the features of independent claim 13, therefore, it would not have been obvious since each claimed feature is not found in the cited reference. For example, there is not mention in Shapiro of a user control for adjusting as claimed. A prima facie case of obviousness requires the reference (as modified) or combination of references to teach or suggest each and every feature. Therefore, the burden has not been met in the Final Office Action.

Furthermore, the Examiner takes Official Notice without any supporting documentary evidence. According to the MPEP 2144.03 official notice without documentary evidence to

support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR **1.113**. Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.

In the instant application, while it may be well known that a processor would require a program, appellant submits that it is not "well known" or capable of instant and unquestionable demonstration that the claimed method could be run by a program product as asserted by the examiner. Thus, the rejection of claim 18 should be reversed.

C. Claims 5, 7, and 11 are not properly rejected under 35 USC 103(a) as being unpatentable over Shapiro in view of US Patent 6,816,158 to Lemelson.

Each of claims 5, 7 and 11 depends from claim 1 and includes all the features recited therein. As pointed out above, claim 1 recites features not found in Shapiro including "a single user control for adjusting the first and second distances of the stereoscopic image displayed by the display means, wherein at least the first distance of the stereoscopic image displayed on the display means is adjusted to correspond to a distance between eyes of a user."

Lemelson teaches, in col. 8, lines 17-29 that control over horizontal or angular position and distance of the viewable locations as defined in Figs. 5 and 6, allows the graphics controller 8 to create viewing locations over a wide area. Alternatively, an external input device allows users to make these adjustments. As described in col. 10, lines 19-40, the external input device permits individual adjustment of the viewing location of the 3-D image on the screen by the user;

however, there is no description or suggestion in Lemelson of Appellant's claimed feature pointed out above. Lemelson does not teach or suggest that the first distance of the stereoscopic image displayed on the display means is adjusted to correspond to a distance between eyes of a user.

Thus, the combination of Shapiro and Lemelson fails to teach the user input making any adjustment where the first distance of the stereoscopic image displayed on the display means is adjusted to correspond to a distance between eyes of a user.

For at least the foregoing reasons, Lemelson fails to cure the deficiencies of Shapiro and it is respectfully requested the rejection of the dependent claims 5, 7 and 11 be reversed.

D. Claim 6 is not properly rejected under 35 USC 103(a) as being unpatentable over Shapiro in view of Lemelson as applied to claim 1 above, and further in view of US Patent 6,760,020 to Uchiyama.

Claim 6 depends from claim 1 and includes all the features recited therein. As pointed out above, claim 1 recites features not found in the combination of Shapiro and Lemelson including "a single user control for adjusting the first and second distances of the stereoscopic image displayed by the display means, wherein at least the first distance of the stereoscopic image displayed on the display means is adjusted to correspond to a distance between eyes of a user."

The Examiner points to Uchiyama as showing a graphical icon for adjusting as particularly recited in claim 6. However, Uchiyama fails to cure the deficiencies of Shapiro as applied to claim 1 as pointed out above. For at least the foregoing reasons, it is respectfully requested the rejection of the dependent claim 6 be reversed.

CONCLUSION

In light of the above, Appellant respectfully submits that the rejections of claims 1-3, 5-7, 9-14, 16-18, 20 and 22 are in error, legally and factually, and must be reversed.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1.(previously presented): An apparatus for producing a stereoscopic image comprising:

display means for displaying two sub-images spaced from one another at a first distance along an X-axis and a second distance along a Z-axis so as to render the stereoscopic image; and

a single user control for adjusting the first and second distances of the stereoscopic image displayed by the display means, wherein at least the first distance of the stereoscopic image displayed on the display means is adjusted to correspond to a distance between eyes of a user.

2.(previously presented): The apparatus according to claim 1, further comprising a plurality of image-deflecting lenticules overlying said display means, the display means being configured with an array of display elements arranged in a plurality of columns and rows so that the axes of the lenticules extend transversely to the columns and rows of the display elements.

3.(previously presented): The apparatus according to claim 1, wherein said single user control is further configured to adjust the stereoscopic image based on a user distance from the display means.

4. (Canceled)

5.(previously presented): The apparatus according to claim 1, wherein said single control is a knob.

6.(previously presented): The apparatus according to claim 1, wherein said single control is an icon.

7.(previously presented): The apparatus according to claim 1, said apparatus further comprising a remote device communicating with said single user control.

8. (Canceled)

9.(previously presented): The apparatus according to claim 1, wherein the first distance is a perceived depth of the stereoscopic image.

10.(previously presented): The apparatus according to claim 1, wherein the second distance defines a perceived position of the stereoscopic image relative to the display means.

11.(previously presented): The apparatus according to claim 9, wherein said apparatus is arranged so that when said single user control is at a minimum the perceived depth of the image is at a minimum and as said single user control moves from a minimum to a maximum the perceived depth of the image increases.

12.(previously presented): The apparatus according to claim 1, wherein said display means is configured as a liquid crystal display.

13.(previously presented): A method for producing a stereoscopic image comprising:

displaying a first and second sub-image on a display so that the sub-images are spaced at a first distance along an X-axis and a second distance along a Z-axis to render the stereoscopic image; and

controlling the first and second distances of the stereoscopic image in response to a user input via a single control so that the first distance of the stereoscopic image is adjusted to correspond to a distance between eyes of a user.

14.(previously presented): The method according to claim 13, further comprising deflecting the stereoscopic image by a plurality of lenticules overlaying the plurality of display elements and extending along respective parallel axes transversely to horizontal rows and vertical columns of a plurality of display elements of the display, wherein said image is autostereoscopic.

15. (Canceled)

16.(previously presented): The method according to claim 13, wherein the first distance provides for a perceived depth of the image.

17.(previously presented): The method according to claim 13, wherein the first distance provides for a perceived position of the image relative to its display.

18.(previously presented): A computer program product for causing a computer to execute the method of claim 13.

19. (Canceled)

20.(previously presented): The method of claim 13, wherein said second distance of said stereoscopic image is further adjusted based on a user distance from the display means.

21. (Canceled)

22.(previously presented): An apparatus for producing a stereoscopic image comprising:

a plurality of columns and rows of display elements configured to display a stereoscopic image;

a plurality of lenticules configured to deflect the stereoscopic image and overlaying the display elements, the plurality of lenticules having respective parallel axes extending transversely to the plurality of columns and rows of the display elements; and

a user controller for adjusting two stereoscopic parameters of the stereoscopic image displayed by the display elements.

IX. EVIDENCE APPENDIX

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132 of this title nor any other evidence entered by the examiner and relied upon by appellant in the appeal.

X. RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any appeals or interferences related to the present application.